

CLAIMS

What is claimed is:

1. A product to provide fade resistant and damage resistant characteristics to a laminate surface, comprising:
 - a release strip element; and
 - a substantially solid acrylic composition applied to one surface of said release strip element, said substantially solid acrylic composition possessing sufficient viscosity to be retained on said release strip element as a substantially uniform layer and possessing sufficiently low viscosity to facilitate crosslinking by thermal processing to provide said fade resistant and damage resistant characteristics.
2. The product of claim 1 wherein the substantially solid acrylic composition consists essentially of:
 - 75%-90% by weight of an oligomer substance;
 - 8%-20% by weight of a monomer substance;
 - 2%-7% by weight of dicumyl peroxide; and
 - less than .1% by weight of nonoxynol-12.
3. The product of claim 2 wherein said oligomer substance is urethane diacrylate.
4. The product of claim 2 wherein said monomer substance is hexadiol diacrylate.
5. The product of claim 1 wherein the substantially solid acrylic composition crosslinks during thermal processing in the temperature range of approximately 126.7° C to 165.6° C.
6. The product of claim 1 wherein the release strip element comprises one item selected from the list of: a metal foil, a polyurethane, a polyolefin and a polyester.
7. A product to provide a coating to a laminate surface, comprising:
 - a release strip element operable to apply a substantially solid acrylic composition to a laminate surface to provide said laminate surface with a fade resistant and damage resistant coating; and

said substantially solid acrylic composition comprising acrylic monomers, solid acrylic oligomers, a thermal initiator, and a wetting agent.

8. The product of claim 7 wherein said acrylic monomers are hexadiol diacrylate.

9. The product of claim 7 wherein said solid acrylic oligomers are urethane diacrylate.

10. The product of claim 7 wherein said substantially solid acrylic composition crosslinks during thermal processing in the temperature range of approximately 126.7° C to 165.6° C.

11. The product of claim 7 wherein said substantially solid acrylic composition consists essentially of:

75%-90% by weight of an oligomer substance;

8%-20% by weight of a monomer substance;

2%-7% by weight of dicumyl peroxide; and

less than .1% by weight of nonoxynol-12.

12. The product of claim 7 wherein the release strip element comprises one of a metal foil, a polyurethane, a polyolefin and a polyester.

13. A system for creating a damage resistant and fade resistant laminate structure, comprising:

a laminate lay-up arrangement including a substrate layer, decorative layer, and a release sheet layer;

means for applying heat to said laminate lay-up arrangement; and

means for applying pressure to said laminate lay-up arrangement;

wherein said means for applying heat and means for applying pressure are operable to perform laminate consolidation of said laminate lay-up arrangement;

said release sheet layer including a substantially solid acrylic composition disposed against said decorative paper layer, wherein said substantially solid acrylic composition comprises acrylic monomers, solid acrylic oligomers, a thermal initiator, and a wetting agent, and wherein said solid acrylic composition provides a cured coating to said decorative paper layer after application of heat by said means for applying heat.

14. The system of claim 13 said acrylic monomers are hexadiol diacrylate.
15. The system of claim 13 wherein said solid acrylic oligomers are urethane diacrylate.
16. The system of claim 13 wherein said means for applying heat thermally processes said laminate lay-up arrangement within the temperature range of approximately 126.7° C to 165.6° C.
17. The system of claim 13 wherein said substantially solid acrylic composition consists essentially of:
 - 75%-90% by weight of an oligomer substance;
 - 8%-20% by weight of a monomer substance;
 - 2%-7% by weight of dicumyl peroxide; and
 - less than .1% by weight of nonoxynol-12.
18. The system of claim 13 wherein said means for applying heat and said means for applying pressure are incorporated in a press band apparatus.
19. The system of claim 13 wherein said decorative layer comprises a melamine resin impregnated and pigment filled cellulose paper.
20. The system of claim 13 wherein said substrate layer comprises a phenolic resin impregnated kraft paper.